1.0 Introduction

Note: (Click here) for Lessons Learned *that may apply* to the requirements contained in this LIR.

This Laboratory Implementation Requirement (LIR) document contains implementation requirements that complement Laboratory Performance Requirement (LPR) 220-06-00, Project Management and Asset Acquisition (Click here). The implementation of these project management requirements for facilities at the Laboratory (each with its own mission, complexity, life cycle, management goals, and hazards) shall be mandatory to ensure timely and cost effective delivery of construction projects required by the Laboratory mission.

Unless otherwise stated in the text, the contents of this document shall be effective on the revised issue date.

See Attachment 4, Guidance for Recommended Major Implementation Criteria for Self-Assessment.

2.0 Purpose

This LIR defines the Laboratory requirements that, when implemented, ensure that facility construction projects are planned, developed, executed, and transitioned to operations in a safe, secure, coordinated, consistent, timely, and cost effective manner.

3.0 Scope and Applicability

3.1 Scope

The requirements defined herein shall apply to all projects as defined in Section 4, Project, and shall be satisfied with varying levels of detail appropriate for the project size and complexity.

3.2 Applicability

Line Item (LI) project – The requirements contained in this LIR shall apply to projects that have not formally requested approval of Critical Decision 2 (CD-2) as of 4/27/00. Projects that requested CD-2 approval prior to 4/27/00 may continue to implement the Construction Project Management LIR requirements that were in effect at time of the request

General Plant Project (GPP)/expense projects – The requirements contained in this version of the LIR shall apply to projects that have not requested approval of their first project authorization (RPA) as of 4/27/00. Projects that requested their first RPA

approval as of 4/27/00 may continue to implement the Construction Project Management LIR requirements that were in effect at the time of the request.

4.0 Definitions

4.1 Terms

acquisition plan: A documented description, prepared by the project team, of the detailed actions and schedule for a procurement.

acquisition strategy: A documented description, prepared by the Department of Energy (DOE), of the methods to be used to acquire a capital asset.

baseline - A quantitative expression of project technical scope, schedule, and cost requirements; the established plan against which the status of resources and the progress of a project is measured.

conceptual design - The activities required to evaluate project design alternatives and to develop sufficient detail to estimate the technical scope, schedule, and cost for project authorization.

critical decision (CD) - A formal determination at a specific point in a project that allows the project to proceed as defined below:

- CD-0 Approval of Mission Need
- CD-1 Approval of Preliminary Baseline Range
- CD-2 Approval of Performance Baseline
- CD-3 Approval of Start of Construction
- CD-4 Approval of Start of Operations

facility owning division (FOD) - The division that owns the facility and is accountable for the project delivery.

integrated project team (IPT) – A team, led by a project team leader and comprised of the appropriate functional experts, that carries out activities to achieve project goals.

major system project – A project or system of projects whose total cost is greater than $400M or any other project so designated by DOE.

Guidance note: A project that is not a major system project is called an "Other Project".

program technical user - Responsible organization in charge of day-to-day operation of the capability produced by the construction project.

project -The activities required for new facility construction or existing facility upgrades or modifications when the construction work is funded by capital funding and the total capital costs exceed $500K. Expense funded construction activities (excluding programmatic equipment) whose total costs exceed $500K shall also be categorized as a project.

project execution plan - A document recording the agreements between DOE and the Laboratory on how a project will be managed.

project team leader (PTL) - The individual with the primary Laboratory accountability for safe and successful delivery of the project according to the project technical scope, schedule, and cost baseline.

request for project authorization (RPA) - A process used to request the use of funds for a defined scope of work.

safety - For this LIR, the term safety encompasses environment, safety, and health, including pollution prevention and waste minimization.

5.0 Implementation Requirements

5.1 Roles and Responsibilities

This section defines roles and responsibilities that shall be implemented for construction project management. Attachment 1 provides expanded roles and responsibilities that shall be implemented for baseline documents. Attachment 3 provides a project roles and responsibilities checklist which shall be used to establish detailed roles and responsibilities for project team members.

5.1.1 Facility Owning Division Leader Shall Be Responsible for:

- Project delivery.
- Owning the constructed or modified facilities including the authorization basis.
- Preparation of the Functional and Operational Requirements (F&ORs) and Design Criteria to meet Mission Need.
- Proposing a qualified PTL for LI projects and appointing a qualified PTL for GPP and Expense projects.
- Establishing, maintaining, and adhering to project baselines.
- Maintaining accurate hazard analyses.
- Attending the monthly project reviews or appointing a delegate to do so.
- Along with the Institution, Facilities, and Construction (IFC) Office Leader,

SUP-3 Representative, and Project Management Division (PMD) Director, approving all requests for project authorization, unless delegated to the PTL.
- Program management in support of specific projects.
- Translation of the overall Laboratory vision and missions into specific and integrated facility mission needs.
- Identification of funding needs for specific Laboratory projects and securing that funding.
- Working with DOE to support DOE preparation of an acquisition strategy that utilizes University procurement processes.
- Approval of the Program Requirements Document (PRD) defining the programmatic deliverables.

The Facility Owning Division Leader (FODL) may utilize people from other organizations to fill the project team leader role, but the FODL shall retain responsibility for the project, unless formally transferred to another division by joint letter from the transferring and receiving division leaders.

5.1.2 Project Team Leader (PTL) Shall:

- Be a University of California employee and be responsible for construction safety in accordance with LIR 402-10-03, HSR Management of Contractor
- Performed Facility Construction /Maintenance, Environmental Restoration/Decontamination and Decommissioning, and Related Drilling Operations.
- Have authority to develop, execute and implement all project activities, including all safety activities.
- Appoint a University Technical Representative (UTR) as required by SUP Division procedures for all project subcontracting activities.
- Be responsible for successfully completing the project within approved technical scope, schedule and budget while meeting Integrated Safety Management (ISM) and Integrated Safeguards and Security Management (ISSM) requirements.
- Provide the technical or professional leadership required for a project. This shall include planning the project, assigning tasks, providing technical and professional guidance, monitoring the progress, managing the finances, and providing the single point of contact with DOE, within the constraints of the project's overall technical and funding plans.
- Be responsible for providing project status reports.

5.1.3 Infrastructure, Facilities, and Construction Office Leader Shall Be Responsible for:

- Oversight and coordination of division programmatic work on specific projects.
- Concurrence on project mission need statements

- Approval of all Requests for Project Authorization for projects

5.1.4 Project Management Division (PMD) Leader Shall Be Responsible for:

- Providing personnel with construction project management skills as established by the project team leader including:
  - planning,
  - project management competence and software tools,
  - project controls services including cost estimating,
  - baseline establishment and change management,
  - A-E and construction subcontract procurement and management in accordance with project team procurement strategy,
  - systems engineering management,
  - quality assurance support services,
  - construction management,
  - managing construction contractor safety,
  - preparation of project reports.

- Hosting monthly project reviews.
- Representing the Laboratory as the single point of contact for institutional project management (i.e., DOE Performance Measures reporting).
- Concurring with PTL appointments.
- Along with the Facility Owning Division Leader, SUP-3 Representative, and the IFC Office Leader, approving all requests for project authorization.
- Performing project assessments against the requirements of this LIR with documentation to project files.
- Publishing lessons learned (click here) from individual projects for use by all project teams.

5.1.5 Health, Safety, and Radiation (HSR) Division Leader Shall Be Responsible for:

- Health, Safety, and Radiation (HSR)) Division Leader shall be responsible for:
  - Providing the facility owning division and the project team with HSR subject matter experts (SMEs) and project deliverables as defined in the project roles and responsibilities letter and other project work planning documents.
  - Providing HSR SMEs to participate in design and other project reviews related to project HSR needs.
  - Qualified person appointed in accordance with Section 5.2.2 to serve as the HSR project representative. Person will:
  - Work with the facility owning division and project team leader to identify applicable HSR requirements.

- Assist the project team in developing plans and tasks that satisfy identified HSR Requirements.
- Serve as the primary interface between the project and other Laboratory groups and divisions that establish or manage Laboratory HSR requirements and expectations.
- Provide project liaison with DOE project HSR representatives implementation meets Laboratory expectations, and institutional liaison.
- Prepare, or identify qualified HSR resources to prepare, required project HSR documentation.
- Coordinate the HSR element of the design review(s).
- Provide documented feedback to both HSR Division and project line management on HSR issues and problems.

5.1.6 Facility and Waste Operations (FWO) Division Leader Shall Be Responsible for:

- Providing the facility owning division and the project team with facility engineering SME's and project deliverables as defined in the project roles and responsibilities letter. These include:
  - Facility engineering requirements.
  - Safety function management (fire protection, facility management and authorization basis).
  - Construction inspection.
  - Laboratory site utilities interfaces.
  - Waste generation and acceptance criteria for the project.
  - As-builts repository.

5.1.7 Supply Chain Management Division (SUP) Leader Shall Be Responsible for:

- Approval of all requests for project authorization, along with the Facility Owning Division Leader, PMD Leader, and the IFC Office Leader.
- Providing the facility owning division and the project team with SUP SMEs and project deliverables. The SUP representative shall provide:
  - Contract administration for the projects, including preparation of a Source Selection Plan and Source Selection Board Report when required.
  - Support of the project team in acquisition planning and preparation of an acquisition plan.
  - Providing funding determination for the project.
  - Financial and property management support to the project team.
  - Development of contract documents.

5.1.8 Safeguards and Security Division Leader Shall Be Responsible for:

- Providing the facility owning division and the project team with Safeguards and Security subject matter experts and project deliverables as defined in the project roles and responsibilities letter.

5.1.9 Performance Surety (PS) Division Leader Shall be Responsible for:

- Providing the facility owning division and the project team with Performance Surety subject matter experts and project deliverables as defined in the project roles and responsibilities letter.

5.1.10 Computing, Communications and Networking (CCN) Division Leader Shall Be Responsible for:

- Providing the facility owning division and the project team with computing and communications subject matter experts and project deliverables as defined in the project rules and responsibilities letter.

5.1.11 Associate Director (AD) Shall Be Responsible for:

- Approval of the Mission Need for line item projects.
- Approval of the PTL for line item projects.

5.2 Process Implementation Requirements

5.2.1 Project Phases

Project management activities at the Laboratory shall be organized into five phases: preconceptual, conceptual, baseline development, execution, and closeout.

Guidance Note: The project deliverables for each CD phase are listed in Attachment 2. This list may be adjusted in conjunction with DOE when the roles and responsibilities letter is prepared or revised.

Guidance Note: For design-build projects, CD-1, CD-2, and CD-3 may be requested and obtained concurrently.

5.2.2 Integrated Project Team (IPT) Formation

For line item projects, the project team leader shall be proposed by the facility owning division leader and approved by the Associate Director (AD) with concurrence of the PMD Leader when approval of the Mission Need (CD-0) is obtained. For projects whose total cost exceeds 100 million dollars, the Laboratory Director will approve the project team leader appointment. For GPP and expense projects, the facility owning division leader shall appoint the project team leader with the concurrence of the PMD Leader. The PTL selection will be

based on an evaluation of project complexity and risks utilizing a process established by the PMD Leader. The PTL shall work with the Laboratory division, program, and support management to establish the integrated project team (IPT). Laboratory Division Leaders shall be responsible for identifying team members who have the required project experience, technical skills, knowledge, and abilities, and access to resources so that the members can represent their entire division/or program office and fully carry out their team roles as defined in this LIR and the roles and responsibilities letter. The initial team membership shall be documented by letter with approval by members' division leaders. Membership changes shall be documented by PTL letter. The team shall initially include, as a minimum, members from the following organizations:

a.) Facility owning division, including the programmatic technical user and/or the facility management group. When the programmatic technical user and facility management group are in different divisions, both divisions shall be represented on the team.
b.) Responsible program office
c.) Project Management Division
d.) Health, Safety, and Radiation Protection Division
e.) Facility and Waste Operations Division
f.) Supply Chain Management Division
g.) Safeguards and Security Division
h.) Performance Surety Division
i.) Computing, Communications, and Networking Division
j.) DOE representative to participate as an active team member to facilitate exchanges of information.

Organizations other than those mentioned above shall have members on the team if the IPT determines that they perform a significant role over the life of the project. IPTs performing nuclear facility work shall have a team member with authorization basis expertise. Key team members, including the Federal Project Manager when appropriate, shall co-locate at or near the project site.

The project team leader shall work with the team to define individual member's roles and responsibilities over the life of the project. The detailed roles and responsibilities shall be documented in letter form, approved by the project team leader, and concurred with by all team members prior to proceeding with the remainder of the conceptual phase project activities. Attachment 3 is a checklist that shall be used, with modifications as required to meet project specific needs, to determine required roles and responsibilities.

The project team leader, with assistance from the IPT, shall identify

or prepare a project quality management plan meeting the requirements of LPR-308-00-00 (Click Here). This plan shall identify the requirements to be implemented for the project to meet the ten quality assurance criteria contained in LPR 308-00-00 as well as specific procedures applicable to radioactive, nuclear, or explosive work. The plan shall be approved by the quality assurance representative to assure Lab wide consistency. This shall be done at the time roles and responsibilities are defined, after the project Mission Need is approved.

5.2.3 Project Control, Reporting, and Closeout

Project controls and reporting shall be conducted in accordance with PMD Procedure 109, Project Controls, or an equivalent procedure that ensures the following requirements are met.

- Earned value management shall be utilized on all projects.
- A complete work breakdown structure shall be defined and included in the Project Execution Plan.
- Project cost estimates include contingency, shall be traceable to work breakdown structure elements of work, and are utilized for budget requests and estimates at completion.
- Schedules utilize critical path methodology.
- Project technical, cost, and schedule risks shall be defined and mitigation strategies implemented.
- Project status reports shall be submitted monthly to DOE and Laboratory
- Management and contain, as a minimum, the following elements:
  - project scope, cost, and schedule status including trends,
  - milestone and financial status,
  - variance analysis and corrective actions,
  - change control activity and use of contingency,
  - safety and security status and,
  - issues and problem areas.
- The format specified in PMD Procedure 109 shall be utilized for reporting;
- Project closeout shall be conducted in accordance with PMD Procedure 606, Project Acceptance and Closeout, or its equivalent.

Guidance Note: Project closeout within 6 months after construction completion is the objective.

5.2.4 Project Baseline Documents

A project baseline composed of technical scope, schedule, and cost components shall be developed for all projects. Baseline documents shall be developed at the beginning of a project, starting with the Mission Need statement, maintained throughout the life of the project, and issued as individual documents. Baseline documents shall be managed using PMD Procedure 107, Configuration Change

Control, and PMD Procedure 109, Project Controls, or equivalent procedures. LANL required baseline documents that shall be placed under change control for each phase of the project are shown in Attachment 1.

When preparing the project's roles and responsibilities letter, the IPT shall consult with the project's DOE representative to determine the required project specific documentation.

Guidance Note: Attachment 1 to this LIR also defines the preparation assignments and minimum approval requirements for the required documents for a project.

In making the decisions on the depth and breadth of the baseline documents for a project, the project team shall implement the Management Level (ML) requirements as specified in LIR 230-01-02, Graded Approach For Facility Work(Click here).

Project plans for value engineering, lifecycle costing, waste minimization, energy conservation, pollution prevention, and sustainable building design shall be documented in the Project Execution Plan.

5.2.5 Work Control and Integrated Safety Management (ISM)

The project team leader and IPT shall implement work control and ISM in accordance with the requirements contained in LIR 230-03-01, Facility Management Work Control (Click here), LIR 300-00-05, Facility Hazard Categorization (Click here), LIR 300-00-06, Nuclear Facility Safety Authorization (Click here), and LIR 300-00-07, Non-Nuclear Facility Safety Authorization (Click here). The integration of design and safety analysis is described in LIR 220-03-01, Engineering Standards (Click here).

5.2.6 IPT Training and Qualification

The project team leader and PMD employees assigned to IPTs shall implement the requirements contained in PMD Procedure 204, Qualification of Personnel, (click here)or an equivalent procedure. All IPT members shall implement the requirements contained in LIR 300-00-04, Laboratory Training (Click here).

5.3 Project Review Requirements

5.3.1 Monthly Project Reviews

IPTs shall start the monthly project review process either when they acquire CD-0 or when they receive the first Request for Project Authorization approval. These reviews shall continue through project

closeout.

Project reviews shall review project technical scope, schedule, and cost status, and assist the IPT in overcoming any potential problems.

The project team leader and a representative from the facility owning division office shall attend the monthly project review meetings. The ALDs/DLDs shall be notified of monthly project review meetings.

5.3.2 Senior Executive Team Reviews

The status of each major systems project and others designated by the Laboratory Director shall be presented monthly to the Senior Executive Team (SET) by the FODD. The PMD Director will summarize the status of other projects

5.3.3 External Reviews

The University of California Project Management Panel shall review selected projects on a periodic basis.

The IPT shall work with DOE to define the required reviews so that they are included in the project baseline.

Guidance Note: DOE will conduct Mission Validation Independent Project Reviews, Performance Baseline External Independent Reviews, Execution Readiness External Independent Reviews, Independent Cost Estimates, and other Independent Project Reviews for selected projects and project stages.

5.3.4 Design Reviews

Project design reviews shall be conducted, at a minimum, at completion of final design. PMD Procedure 308, Revision 0, or later revisions or facility owning division equivalent procedures shall be utilized.

6.0 References

6.1 Document Ownership

The office of institutional coordination (OIC) for this LIR shall be the Project Management Division, PMD, 5-0000.

6.2 Documents

DOE Order 413.3, Program and Project Management for the Acauisition of Capital Assets.

LAUR-98-2837, Integrated Safety Management Description Document (ISM).

LPR 220-06-00, "Project Management and Asset Acquisition," Los Alamos National Laboratory.

LPR 308-00-00, "Quality," Los Alamos National Laboratory.

LIR 402-10-03, "HSR Management of Contractor Performed Facility Construction/Maintenance, Environmental Restoration/Decontamination and Decommissioning, and Related Drilling Operations," Los Alamos National Laboratory.

LIR 402-10-01, "Hazard Analysis and Control for Facility Work," Los Alamos National Laboratory.

LIR 300-00-07, "Non-nuclear Facility Safety Authorization," Los Alamos National Laboratory.

LIR 300-00-06, "Nuclear Facility Safety Authorization," Los Alamos National Laboratory.

LIR 300-00-05, "Facility Hazard Categorization," Los Alamos National Laboratory. LIR 300-00-05.

LIR 300-00-01, "Safe Work Practices," Los Alamos National Laboratory.

LIR 240-01-01, "Facility Configuration Management," Los Alamos National Laboratory.

LIR 230-01-02, "Graded Approach for Facility Work," Los Alamos National Laboratory.

LIR 300-00-04, "Laboratory Training," Los Alamos National Laboratory.

LIR 230-01-01, "Facility Management Work Control," Los Alamos National Laboratory.

PMD Procedure 606, "Project Acceptance and Closeout," Los Alamos National Laboratory.

PMD Procedure 107, "Configuration Change Control," Los Alamos National Laboratory.

PMD Procedure 204, "Qualification of Personnel," Los Alamos National Laboratory.

7.0 Attachments

Attachment 1 Required Baseline Documents for All Projects with Minimum Preparation and Approval Requirements
Attachment 2 Critical Elements of CD Packages
Attachment 3 Project Roles and Responsibilities Checklists
Attachment 4 Recommended Major Implementation Criteria for Self Assessment

ATTACHMENT 1
REQUIRED BASELINE DOCUMENTS FOR ALL PROJECTS WITH MINIMUM PREPARATION AND APPROVAL REQUIREMENTS

Project Phases	**Pre-Conceptual**	**Conceptual**						**Baseline Development**		**Execution**		**Closeout**		
	Program Requirements	**Team Formation**				**Performance Requirements**	**Project Conceptualization**	**Preliminary Design**		**Detailed Design**	**Construction**	**Turnover**		**Closeout**
	Mission Need Document/Program Requirements Document	Team Appointment Letter* (See Section 5.2.2)	Letters Defining Roles and Responsibilities*	Quality Management Plan	Schedule/Budget to CD1	Functions & Operation Requirements and Design Criteria**	Scope/Schedule/Budget from CD 1 to Completion (firm for design phase, range for remainder)	General Arrangement Drawings/One-Line Diagrams/P&IDs as Appropriate	Schedule/Budget/Scope Performance Baseline	Construction Drawings & Specifications as Appropriate	Field Changes & NCRs to Baseline Drawings or Specifications	Official Acceptance of Construction	As-Built Drawings as Required by Facility Configuration Management Plan	Project Closeout Report
Project Team Leader	S: Mission Need P: Program Requirements Document			P/A	A **	P/A	A **	A	A **	A	A	P	P	A
Integrated Project Team	S	Team Members' Division Leaders Approve Initial Membership	S/C	S/C	P/C	P/C	P/C	P/S	P/C	P/S	P	P	S	P
Facility Owning Division (FOD) Leader	P: Mission Need for LI Projects P/A: Mission Need for GPP & Exp. A: Program Requirements Document	P: Proposes PTL for LI Projects A: Appoints PTL for GPP & Expense Projects		C		P/C	C		C			A: FMU	A: FMU	
PMD Leader		C: All PTL appointments												
IFC	C. Mission Need													
AD	A; Mission Need for LI Projects	A: PTL for LI Projects ***												
DOE Representative	A: Mission Need for LI Projects						A: LI Projects		A:LI Projects					A

P= Prepare/Provide
S= Support Preparation
C= Concurrence
A= Approval

*** Updated by the PTL throughout the life of the project as necessary.**
**** Within constraints established by the LANL Associate Director.**
***** Laboratory Director approves PTL for projects whose total cost exceeds 100 million dollars.**
Note: Preparation of minimum documents for a given project phase shall be required before proceeding to the next phase. If the project team is unable to obtain concurrence on an issue or a document, the PTL shall bring the matter to the facility owning division leader for resolution with peers. If needed, the matter shall be brought to the responsible LANL Associate Director.

Guidance Note: When assigning responsibilities, a determination should be made on the procedure to be used to carry out the responsibility. These may be selected from LPRs, LIRs, PMD procedures, Facility Owning Division procedures, or other appropriate sources. The procedures selected should be used to formulate the Quality Management Plan.

ATTACHMENT 2
CRITICAL ELEMENTS OF CD PACKAGES

Pre-Conceptual Phase		Conceptual Phase		Baseline Development Phase		Execution Phase		Closeout Phase	
CD-0 PACKAGE CRITICAL Elements	PROJECT APPLICABILITY	CD-1 PACKAGE CRITICAL ELEMENTS	PROJECT APPLICABILITY	CD-2 PACKAGE CRITICAL ELEMENTS	PROJECT APPLICABILITY	CD-3 PACKAGE CRITICAL ELEMENTS	PROJECT APPLICABILITY	CD-4 PACKAGE CRITICAL ELEMENT	PROJECT APPLICABILITY
Mission Need Document	Expense, GPP, LI	Request for Project Authorization	Expense, GPP, LI	Preliminary Design	Expense, GPP, LI	Final Design and Procurement Specifications	Expense, GPP, LI	Operational Readiness Report as required	Expense, GPP, LI
Program Requirements Document	LI only	Preliminary Project Execution Plan	LI only	Performance Baseline	Expense, GPP, LI	Preliminary Safety Analysis Report as required	Expense, GPP, LI	Construction Acceptance Package	Expense, GPP, LI
Conceptual Design Plan	LI only	Functional and Operational Requirements (F&ORS) and Design Criteria	Expense, GPP, LI	Final Project Execution Plan	Expense, GPP, LI			Turnover Package	Expense, GPP, LI
Acquisition Strategy	LI only	Conceptual Design Report (CDR)	LI only	Project Data Sheet for Construction	LI only			Final Safety Analyses Report and/or Authorization Basis as required	Expense, GPP, LI
		Conceptual Summary Documentation	GPP only	NEPA Documentation	Expense, GPP, LI				
		Project Data Sheet for design	LI only						
		Acquisition Plan	LI only						
		Preliminary Hazard Analyses	LI only						

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Pre-Conceptual Phase	Project Team													
	Not Applicable (NA)	Project team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	FWO Rep.	PS Reps	CCN Rep	Security Rep	IPT as a Whole	Comments
Prepare the Mission Need document														
Document project need related to program mission														
Prepare Program Requirements Document														
Obtain and document project I.D. number														
Document planning and integrate funding among Laboratory projects														
Perform funding determination														
Prepare Conceptual Design Plan if required														
Assist DOE in preparing Acquisition Strategy														
Prepare CD-0 package														
Preliminary NEPA Strategy														
Integration with other Projects														
Preliminary Acquisition Plan														
Safeguards and Security Requirements														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Conceptual Phase	Project Team													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	FWO Rep.	PS Rep.	CCN Rep.	Security Rep	IPT as a Whole	Comments
Identify, document, and assign the project team leader														
Select team members and document responsibilities and qualifications														
Identify and develop preliminary project procedures and issue procedures to IPT members														
Authorize project related work in writing														
Develop and document Functions and Operational Requirements (F&ORs)														
Identify and prepare project definition studies or feasibility studies														
Preliminary FHA														
Project Security Plan (if required)														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Conceptual Phase	Project Team													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	Facility Manager Rep.	PS Rep.	CCN Rep.	Security Rep	IPT as a Whole	Comments
Identify, review, and incorporate lessons learned from similar projects														
Document project interfaces and integration with other projects														
Prepare preliminary project schedule and rough order of magnitude (ROM) of the total project cost (TPC)														
Obtain HSR-ID number and complete initial review														
Perform and document hazard analysis (LIR 300-00-06)														
Identify and document facilities hazard category and management level (LIR 300-00-05)														
Identify and document natural phenomena hazards (NPH)														
Identify and document mitigation performance category														
Prepare safety strategy														
Prepare NEPA strategy and initiate														
Prepare waste minimization plan														
Identify and document safeguards and security requirements														
Conduct and document project risk assessment														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Conceptual Phase	Project Team													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	Facility Manager Rep.	PS Rep.	CCN Rep.	Security Rep	IPT as a Whole	Comments
Define and document project acquisition plan														
Project Execution Plan Draft														
Prepare Project Quality Management Plan														
Update Conceptual Design Plan														
Document Sustainable Design Plan														
Prepare Systems Engineering Management Plan														
Prepare Project Records Management Plan														
Prepare Project Configuration Management Plan														
Prepare WBS and WBS dictionary to level 3 (or other level a sppropriate)														
Identify, assess, and document conceptual design alternatives														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Conceptual Phase	**Project Team**													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep	. HSR Div. Rep	SUP Rep.	. Facility Manager Rep.	PS Rep.	CCN Rep.	.Security Rep	IPT as a Whole	Comments
Develop and document requirements for Energy Conservation Report or Plan														
Develop and document design criteria that encompass applicable standards and requirements														
Form Change Control Board (CCB)														
Conduct monthly baseline reviews														
Prepare and submit monthly project status reports														
Prepare SOW and select A/E for conceptual design														
Prepare Value Engineering Study or Plan														
Conduct and document 30% conceptual design review														
Conduct and document 60% conceptual design review														
Conduct and document 90% conceptual design review														
Prepare project data sheet for design														
Identify and document safety structures, systems, and components														
Conduct life cycle cost analysis														
Prepare schedule and budget from CD-1 to project completion														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Conceptual Phase	Project Team													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	Facility Manager Rep.	PS Rep.	CCN Rep.	Security Rep	IPT as a Whole	Comments
Complete and issue Conceptual Design Report (CDR)														
Prepare and submit necessary environmental plans and permits														
Prepare project safety plan														
Identify and document roles and responsibilities for facility management work control														
Prepare CD-1 package														
Start preparation of System Design Descriptions (DOE Std 3024)														
Prepare Staffing Plan														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Baseline Development Phase	**Project Team**													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	Facility Manager Rep.	PS Rep.	CCN Rep.	Security Rep	IPT as a Whole	Comments
Identify, review, and incorporate lessons learned from similar design projects														
Conduct and document 30% Title I design review, including cost and schedule														
Conduct and document 60% Title I design review, including cost and schedule														
Conduct and document 90% Title I design review, including cost and schedule														
Prepare Energy Conservation Report or waiver														
Update Construction Project Data Sheets														
Perform Preliminary Design														
Prepare Performance Baseline														
Finalize Project Execution Plan														
Complete NEPA Documentation														
Prepare CD2 Package														
Startup, operations, and turnover properly in scope, schedule, and cost														
Security Systems requirements including VA and MCAA Plan if required														

ATTACHMENT 3

PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Execution Phase	Project Team													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	Facility Manager Rep.	PS Rep.	CCN Rep.	Security Rep	IPT as a Whole	Comments
Update Construction Project Data Sheets														
Conduct and document 30% Title II design review, including cost and schedule														
Conduct and document 60% Title II design review, including cost and schedule														
Conduct and document 90% Title II design review, including cost and schedule														
Review and document the acceptance of system design descriptions														
Finalize system design descriptions														
Security System design and VA report and MC&A plan if required														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Execution Phase	**Project Team**													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep	SUP Rep..	Facility Manager Rep.	PS Rep.	CCN Rep	Security Rep	IPT as a Whole	Comments
Review and document the acceptance of construction drawings and specifications														
Finalize/complete the life cycle cost analysis														
Prepare construction procedures including inspection														
Prepare acceptance test procedures														
Prepare CD-3 package														
Finalize Preliminary Safety Analysis Report														
Finalize/complete Value Engineering Study document														
Finalize FHA														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Execution Phase	**Project Team**													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep.	HSR Div. Rep.	SUP Rep.	Facility Manager Rep.	PS Rep.	CCN Rep.	.Security Rep.	IPT as a Whole	Comments
Prepare and apply for construction permit														
Prepare pre-solicitation notices														
Prepare construction RFP (s)														
Conduct and document pre-solicitation meeting (s)														
Review and document the acceptance of vendor submittals														
Approve work authorization request (s)														
Document the award of construction subcontract (s)														
Conduct and document construction readiness assessment(s)														
Review and approve construction PHA														
Prepare as-built drawings														
Incorporate FCNs and NCRs in baseline specifications and drawings														
Monitor and report construction cost and schedule status														
Document Construction Acceptance														
Prepare Construction Safety Plan including fire protection														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Closeout Phase	**Project Team**													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep	HSR Div. Rep.	. SUP Rep	Facility Manager Rep..	PS Rep.	CCN Rep.	.Security Rep	IPTm as a Whole	Comments
Prepare readiness review and transition to operations plan														
Identify and document safety requirements, e.g., OSRs and TSRs														
Prepare necessary safety documentation, e.g., Safety Analysis Report														
Develop operations and maintenance procedures														
Prepare security operations plan														

ATTACHMENT 3
PROJECT ROLES AND RESPONSIBILITIES CHECKLISTS

Closeout Phase	Project Team													
	Not Applicable (NA)	Project Team Leader	Facility Owning Div. Rep.	Program Office Rep.	PMD Rep (P/L or as appropriate)	DOE Rep	. HSR Div. Rep	SUP Rep..	Facility Manager Rep.	PS Rep.	CCN Rep.	Security Rep	IPT m as a Whole	Comments
Conduct and document Readiness Assessment including findings														
Perform and document Start-up Acceptance Testing														
Finalize/complete Authorization Basis documents														
Conduct and document facility turnover														
Submit final cost reports to DOE														
Document lessons earned														
Complete project records and files														
Complete financial closeout														
Prepare close-out report														
Document the archive of project records and files completed														
Prepare CD-4 package														

ATTACHMENT 4
GUIDANCE FOR RECOMMENDED MAJOR IMPLEMENTATION CRITERIA FOR SELF_ASSESSMENT

LIR Title	LIR Number
Construction Project Management	LIR 220-01-01.4

The major implementation criteria listed below are provided to assist Laboratory organization to assess their implementation of this LIR. These criteria provide an objective basis for self-assessing implementation of the major requirements contained in the LIR. The LIR also states requirements in other areas, such as, scope, precautions, and responsibilities that, when applied, complement the successful implementation of these major requirements.

1. The most important criterion for assessing the implementation status of this LIR should be, if applicable: Have the requirements contained in the LIR been communicated to the individual(s) responsible for performing the work?

2. In addition, the recommended major implementation criteria for self-assessment of this LIR are the following:

    - A Mission Need is written, approved, and is subject to change control.
    - The Project Team has been identified and roles and responsibilities are specifically identified.
    - Functional and Operational Requirements and Design Criteria are developed and are under change control.
    - A Project Execution Plan has been approved for the project and is subject to change control.
    - Project procedures are documented, adhered to, and changes are controlled.
    - A cost estimate has been developed that spans the life cycle of the project.
    - A project scope, schedule, and cost baseline exists and appropriate change controls are adopted to control variances.
    - Responsibilities of A-Es and contractors are concisely documented and interface points are established.
    - Management interfaces and Quality Assurance requirements are defined.
    - Attachment 1 in this LIR is followed.